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Complete if Known Substitute for form 1449A/PTO 10/037,593 **Application Number** FORMATION DISCLOSURE October 19, 2001 Filing Date ATEMENT BY APPLICANT Matthew P. Kulig First Named Inventor 2157 **Art Unit** Barbara N. Burgess (use as many sheets as necessary) **Examiner Name** 60022210-0157 of 6 **Attorney Docket Number**

		U.:	S. PATENT DO	CUMENTS	
Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ^{2 (if known)}	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages of Relevant Figures Appear
	IN	US 2001/0056547 A1	12-27-2001	Dixon	•
	10	US 2003/0009693 A1	01-03-2003	Brock et al.	
	IP	US 2003/0014662 A1	01-16-2003	Gupta et al.	
	IQ	US 2003/0051043 A1	03-13-2003	Wyschogrod et al.	
	IR	US 2003/0074582 A1	04-17-2003	Patel et al.	
-	IS	US 5,347,634	09-09-1994	Herrell et al	
	IT	US 5,371,794	12-06-1994	Diffie et al.	
	IU	US 5,421,028	05-30-1995	Swanson	
	IV	US 6,028,939	02-22-2000	Yin	
-	IW	US 6,389,532 B1	05-14-2002	Gupta et al.	
	IX	US 6,804,667 B1	10-12-2004	Martin	
	IY	US 7,127,510 B1	10-24-2006	Yoda et al.	
		U.	S. PATENT DO	CUMENTS	
Examiner	Cite	Document Number	Publication	Name of Patentee or	Notices of
Initials*	No. ¹	Number-Kind Code ^{2 (if known)}	Date MM-DD-YYYY	Applicant of Cited Document	Allowance mailed
	0046 US 2005/0086		04/21/2005	Dharmapurikar et al.	07/09/2008
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Examiner Signature		/Barbara Burges	s/	Date Considered	02/12/2009

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Initials*		Country Code ³ Number ⁴ Kind Cod		ber4 Kind Code5 (if known)	MM-DD-YYYY	Applicar	nt of Cite	ed Document	Relevant Figures Appear				
	IZ	EP 0 573 991 B1 JP 9-269930			01-16-2002	Cantor	Fitzge	erald					
	JA				10-14-1997	Hitachi	Ltd.						
						Nat'l Aerospace Lab							
	JB	JP 10-	31334	1	11-24-1998		Kagaku Gijutsu Shinko						
		15.000	0.057	470	40.00.0000	Jigyodan							
	JC	JP 200			12-26-2000	IBM	14.1						
	JD	JP 200			01-19-2001	Hitachi	Lta.						
	JE	JP 200			10-08-2001	0-16-2001 Worldtalk Corporation 0-20-1990 Chicago Board of Trade 0-16-1997 ORIS, LLC							
<u></u>	JF	JP 200											
	JG	WO 90								ļ			
	JH	WO 97											
	Л	WO 99			02-04-1999	 		rporation		ļ			
	JJ	WO 99	<u>/5505</u>	2 A1	10-28-1999	Sun Microsystems, Inc.							
	JK	WO 01/39577 A1			06-07-2001	-2001 Nokia Mobile Phones Ltd.							
	JL	WO 03	WO 03/036845 A2		05-01-2003	Global Velocity		ity					
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Substitute for form 1449B/PTO							plete if Known				
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			ОТІ	HER ITEMS - NON P	ATENT LITERA	TURE DOCU	MENTS				
Examiner Initials*	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the										
	JM	<u>Technical</u>	Disclo	sure Bulletin, Vol. 27,	No. 10B, New Y	ork, NY, Marc	le of Known Size", <u>IBM</u> ch 1. 1985.				
	JN	Internation	nal Cor		r Design: VLSI ir		Proceedings 1993 IEEE and Processors, October 3,				
	JO BAER, Jean-Loup, <u>Computer Systems Architecture</u> , pp. 262-265, Computer Science Press, Rockville, MD, 1980.										
JP BARONE-ASESI, G. & WHALEY, R., "Efficient Analytic App Journal of Finance, 42(2): 301-320, June 1987.											
i	JQ	Queued A	TM Sv	itthias et al., "ABR An vitch", <u>IEEE Global Te</u> ustralia, Nov. 1998.	chitecture and S elecommunication	imulation for a ons Conferenc	in Input-Buffered and Per-VC e (Globecom'98), pages 1817-				
	JR	BRAUN, Florian et al., "Layered Protocol Wrappers for Internet Packet Processing in Reconfigurable Hardware", Washington University, Department of Computer Science, Technical Report WUCS-01-10, July, 2001, Proceedings of Hot Interconnects 9 (Hotl-9), Stanford, CA, Aug. 22-24, 2001, pp. 93-98.									
	JS	CHANEY, Sixteenth	EY, Tom et al., "Design of a Gigabit ATM Switch", <u>Proceedings IEEE</u> , 1:2-11, <u>INFOCOM '97</u> , oth Annual Joint Conference of the IEEE Computer and Communications Societies, April 7-107, Kobe, Japan.								
	JT	CHOI, Sumi et al., "Design of a Flexible Open Platform for High Performance Active Networks", (Presentation Slides) Allerton Conference, Champaign, IL, 1999.									
	CONG, Jason & DING, Yuzheng, "An Optimal Technology Mapping Algorithm for Delay Optimization in Lookup-Table Based FPGA Designs", IEEE/ACM International Conference on Computer-Aided Design, Santa Clara, CA, Digest of Technical Papers., pp. 48-53, November 8, 1992.										
	JV		DHARMAPURIKAR, Sarang et al., "Synthesizable Design of a Multi-Module Memory Controller", Washington University, Dept. of Computer Science, <u>Technical Report WUCS-01-26</u> , October 12,								
Examine Signature			/Ba	urbara Burgess/		Date Considered	02/12/2009				

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unque citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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	JW	buffered AT	M Switch	nes", <u>IEEE Infoco</u>	<u>m '97, pp 20-28,</u>	Kobe, Japan,	esign Prototype for Input- April 7-11, 1997.			
	JX	EBELING, Carl et al., "RaPiD - Reconfigurable Pipelined Datapath", FPL '96: The 6th International								
	JY	FELDMANN, Anja, "BLT: Bi-Layer Tracing of HTTP and TCP/IP", Computer Networks 33(1):321-335, June 2000.								
	JZ	GAVRILA, D.M., "Multi-feature Hierarchical Template Matching Using Distance Transforms", <u>Proceedings of the 14th International Conference on Pattern Recognition</u> , 1:439-444, Brisbane, Qld., AU, August 16-20, 1998.								
	KA	GUNTHER, Bernhard et al., "Assessing Document Relevance with Run-Time Reconfigurable Machines", <u>IEEE</u> , pp. 10-17, <u>Proceedings, IEEE Symposium on FPGAs for Custom Computing Machines</u> , Napa Valley, CA, April 17, 1996.								
	КВ	HAYES, John P., Computer Architecture and Organization, Second Edition, 1988, pp. 448-459, McGraw-Hill, Inc., New York, NY, 1988. HORTA, Edson L. et al., "PARBIT: A Tool to Transform Bitfiles to Implement Partial Reconfiguration								
	кс									
-	KD	KUHNS, Fred et al., "Implementation of an Open Multi-Service Router", Washington University, Department of Computer Science, Technical Report WUCS-01-20, August 15, 2001.								
	KE	LIN, Ting-Pang et al., "Real-Time Image Template Matching Based on Systolic Amy Processor", International Journal of Electronics, December 1, 1992, pp. 11651 176, Vol. 73, No. 6, London, Great Britain.								
	KF	LOCKWOOD, John W., "Project History and Previous Research on the Illinois Input Queue and WUGS/iiQueue Integration, Aug. 1998.								
	KG			W., "Quality of Sout ut Queue, Decen			ngton University Gigabit S eaign, IL.	Switch		
Examine Signature	- 1	/Barbara	Burges	s/		Date Considered		2/2009		

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unque citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language Translation is attached.

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	кн	for the iF	POINT T	estbed", Ph	nD Dissert		nt of Electrical	and Comp	Buffered ATM Switch uter Engineering,	
1	кі	MOSANYA, Emeka et at., "A FPGA-Based Hardware Implementation of Generalized Profile Search Using Online Arithmetic", ACMISIGDA International Symposium on Field Programmable Gate Arrays, February 21, 1999, pp. 101-111, Monterey, California								
	KJ	Confere	nce 199	9, Proceedi	<u>ings</u> , Italy,	tchLITE FPGA-I Sept. 8-10, 199	9, Los Alamito	s. CA		
	кк	Applicat	ions", <u>Jo</u>	ournal of Co	mputing a	ormance Study of and Information,	Vol. 1, No. 1, I	May 1994, բ	op. 1621-1636.	
	KL	Comput	ers", IEE	E Transac	tions on C	t Hardware Has omputers 46(12):1378-1381, E	ecember 1	997.	
	KM	Custom	Comput	ting Machin	<u>es</u> , pp. 20	4-213, Los Alam	nitos, California	i, April 19, 1	oosium on FPGAs for 1995.	
	KN	IN, May	31, 200	0, from: http	o://proque	st.safaribooksor	line.com/0130	183741	II PTR, Indianapolis,	
	ко	ROBER Caspian	TS, Law Networ	rence, "Inte ks, Inc V	ernet Still (irtual Pres	Growing Dramat scroom, PR New	ically Says Intersylves, New Yo	rnet Found rk, NY, Aug		
	KP	SCHMIT, Herman, "Incremental Reconfiguration for Pipelined Applications", IEEE, 47-55,								
	SHIRAZI, N. et al., "Quantitative Analysis of FPGA-Based Database Searching", <u>Journal of VLSI Signal Processing Systems for Signal, Image, and Video Technology</u> , May 2001, pp. 8596, Vol. 2 No. 112, Dordrecht, Netherlands								1, pp. 8596, Vol. 28,	
	KR								ngton University, 2001.	
	Considered Department of Computer Science, Technical Report WUCS-01-33, October 1, 2001.									

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	KS	VILLASENOR, John et al., "Configurable Computing Solutions for Automatic Target Recognition", Proceedings of IEEE Symposium on FPGAs for Custom Computing Machines, April 17, 1996, pp. 70-79, Los Alamitos, California.							
	кт	WOOSTER, et al., "HTTPDUMP Network HTTP Packet Snooper", April 25,1996, available at http://ei.cs.vt.edu/~succeed/96httpdump/html/paper.html							
Examiner /Barbara Burgess/				rgess/		Date Considered	02/12/20	009	

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